

CLAIMS

1. A valve for use with a pressurized receptacle containing a fluid to be dispensed therefrom, said valve comprising a housing having an axis, and including an orifice for dispensing said fluid, a shutter member disposed in said housing, said shutter member movable along said axis under the action of gravity between a closed position in which said shutter member substantially closes said orifice when said valve is in a predetermined orientation and a dispensing position in which said shutter member releases said orifice, and at least one surface adapted to prevent movement of said shutter member parallel to said axis over at least a portion of the path between said closed position and said dispensing position.

2. The valve of claim 1 wherein said at least one surface is adapted to impart a helical motion to said shutter member.

3. The valve of claim 1 wherein said housing includes an inner wall, and said at least one surface comprises a threaded rod including at least one thread which cooperates with said inner wall of said housing to define a substantially helical passage constraining the movement of said shutter member between said closed position and said dispensing position.

4. The valve of claim 1 wherein said housing includes an inner wall, and said at least one surface comprises a helical groove in said inner wall of said housing and a rod within said housing constraining the movement of said shutter member along said helical groove between said closed position and said dispensing position.

5. The valve of claim 3 wherein said threaded rod includes an inner channel for the flow of said fluid towards said orifice.

6. The valve of claim 3 wherein said threaded rod is free of an inner channel which would permit flow of said fluid towards said orifice therethrough.

7. The valve of claim 1 wherein said at least one surface comprises at least one deflector within said housing, said at least one deflector providing an obstacle deflecting the movement of said shutter member between said closed position to said dispensing position.

8. The valve of claim 7 wherein said at least one deflector comprises at least one separate element affixed to the wall of said housing.

9. The valve of claim 7 wherein said at least one deflector comprises at least one integral element formed integrally with said wall of said housing.

10. The valve of claim 1 wherein said housing comprises a valve body.

11. The valve of claim 1 including a valve body, and wherein at least a portion of said housing comprises a separate element affixed to said valve body.

12. The valve of claim 1 including an absorber disposed downstream of said shutter member in the direction of flow of said fluid, said absorber adapted to absorb at least one propellant gas contained within said receptacle, whereby said absorber can release at least a portion of said at least one propellant gas upon a decrease in pressure in the area adjacent to said absorber.

13. The valve of claim 12 wherein said absorber comprises porous material.

14. The valve of claim 12 wherein said absorber comprises a material capable of absorbing said at least one propellant gas.

15. The valve of claim 14 wherein said at least one propellant gas is selected from the group consisting of an alkane, a fluorine-containing compound and dimethyl ether.

16. The valve of claim 12 wherein said absorber comprises polyamide fibers.

17. The valve of claim 12 wherein said absorber comprises a separate sintered member.

18. The valve of claim 12 wherein said absorber comprises silicone.

19. The valve of claim 12 wherein said housing comprises a valve body, and including a chamber in fluid communication with said valve body by means of said orifice, and wherein said absorber is disposed within said chamber.

20. The valve of claim 1 wherein said predetermined orientation comprises a head-down position of said valve, and wherein the position for normal use of said valve comprises a head-up position of said valve.

21. The valve of claim 1 wherein said predetermined orientation comprises a head-up position for said valve, and wherein the position of normal use of said valve comprises a head-down position for said valve.

22. The valve of claim 1 including actuating means for actuating said valve, said actuating means being actuated by being depressed.

23. The valve of claim 1 including actuating means for actuating said valve, said actuating means being actuated by being rocked.

24. The valve of claim 11 wherein said separate element comprises a dip tube.

25. The valve of claim 15 wherein said alkane is selected from the group consisting of butane, isopropane and isobutane.

26. The valve of claim 15 wherein said fluorine-containing compound is selected from the group consisting of difluoroethane 152a and trifluoroethane 134a.

27. The valve of claim 16 wherein said polyamide fibers comprise nylon fibers.

28. The valve of claim 17 wherein said separate sintered member comprises a high porosity sintered member.

29. A dispensing device comprising a pressurized receptacle and a valve as defined in claim 1.

30. A valve for use with a pressurized receptacle containing a fluid to be dispensed therefrom, said valve

comprising a housing having an axis, and including an orifice for dispensing said fluid, a shutter member disposed in said housing, said shutter member movable along said axis under the action of gravity between a closed position in which said shutter member substantially closes said orifice when said valve is in a predetermined orientation and a dispensing position in which said shutter member releases said orifice, and at least one surface adapted to inhibit the movement of said shutter member over at least a portion of the path between said closed position and said dispensing position.